

County Road Administration Board

Transportation System Preservation (part 1)

**Washington State
Transportation Commission
March 20, 2007**

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Presentation Objectives

- Discuss relationships between components of the transportation system
- Discuss factors that lead to county roadway management decisions
- Discuss transportation Cooperation / Coordination / Competition

Who is CRAB? (intro to agency)

RCW 36.78

CRAB Mission:

To preserve and enhance the transportation infrastructure of Washington State Counties by providing standards of good practice, fair administration of funding programs, leadership, and progressive and professional technical services.

Transportation System

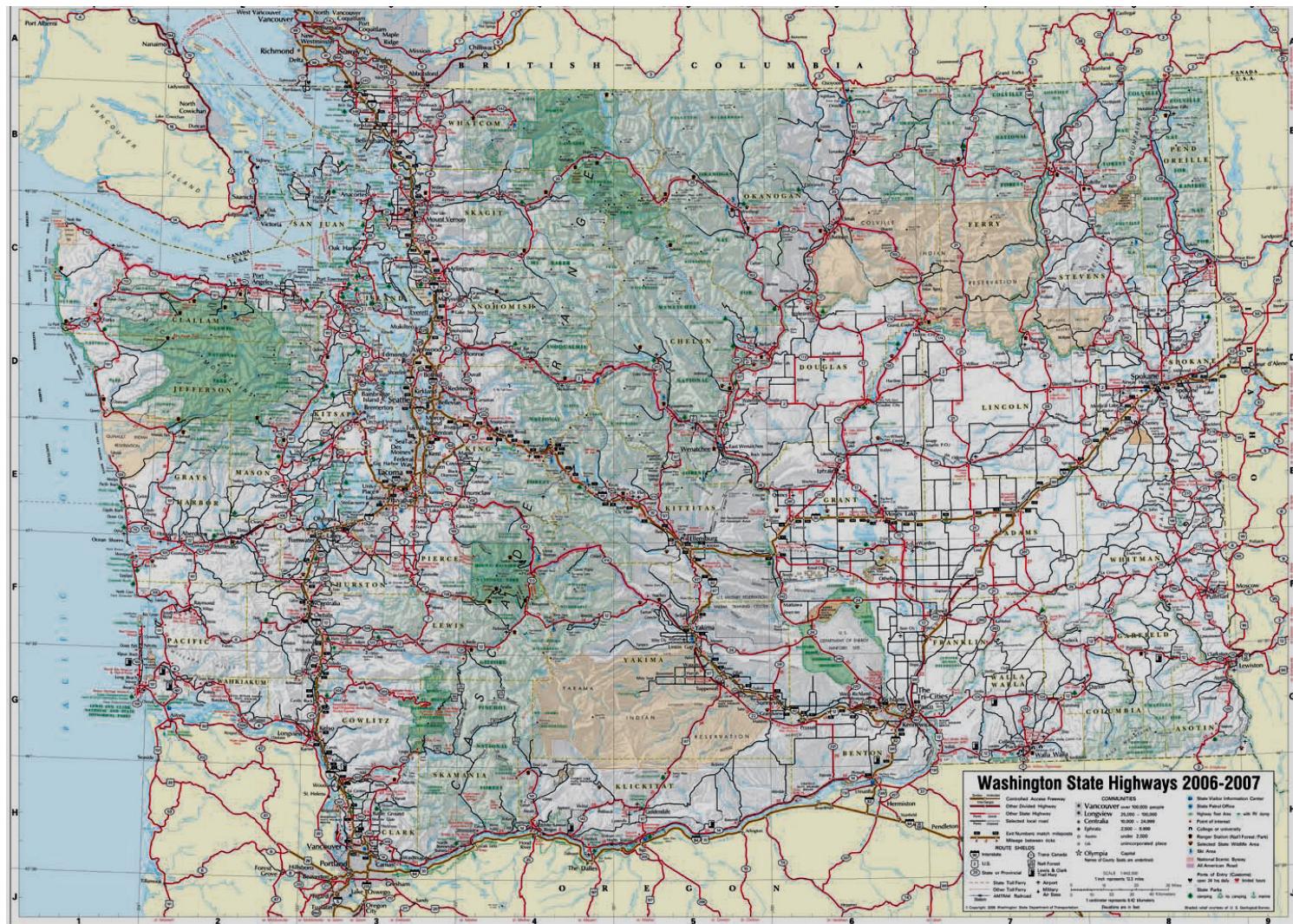
■ System element differences

- Jurisdictions - Local / State / Port / Tribal / Federal / Private / etc
- Magnitude of use

■ System element similarities

- Users
- Travel modes
- Need for inter-connection

How people see the system



How people use the system

Jurisdiction	Lane Miles	Daily Vehicle Miles Traveled
State	20,003	86,222,000
County	80,396	23,444,000
City	34,728	40,972,000
Other	36,156	1,479,000

(Lane Miles by Jurisdiction - 2007 WTP)

Terminology and Concepts

- Surface / Structural / Functional conditions
- Roadway capacity
- Minimum tolerable condition
- Pavement types (PCC/ACP/BST/GRV)
- Routes / Routing / Corridors
- Safety (engineering, education, enforcement)

- “Level of Service”

County Road System

- **Jurisdictions with the largest component of statewide system**
- **Significant amount of rural (low volume) roadways, critical to resource and agriculture industries**
- **Provides significant ‘alternate’ routes for state highway system**
- **Only travel option for many users**

County Road System Centerline Miles (2005)

Urban Collector /	1,917
Arterial local access	4,333
Rural Collector / Arterial	12,587
Rural local access	21,030
Total (centerline miles)	39,867
(22% of system has travel lane widths of 9-ft or less)	

County Road System
Pavement Type (2005)

Portland Cement	127
Asphalt	8,455
BST	17,215
Gravel	11,845
Dirt	2,225
Total (centerline miles)	39,867

Preserve or Improve?

- **Roadway use and capacity**
- **Pavement management decision-making**
- **Safety issues**
- **Multi-modal demands**
- **Financial capacity (base funding and predicted grant revenues)**

- **Local level of service decisions**

Typical Roadway Structure

(presence of layers and their thicknesses vary)

Driving Surface

Leveling Layer (s)

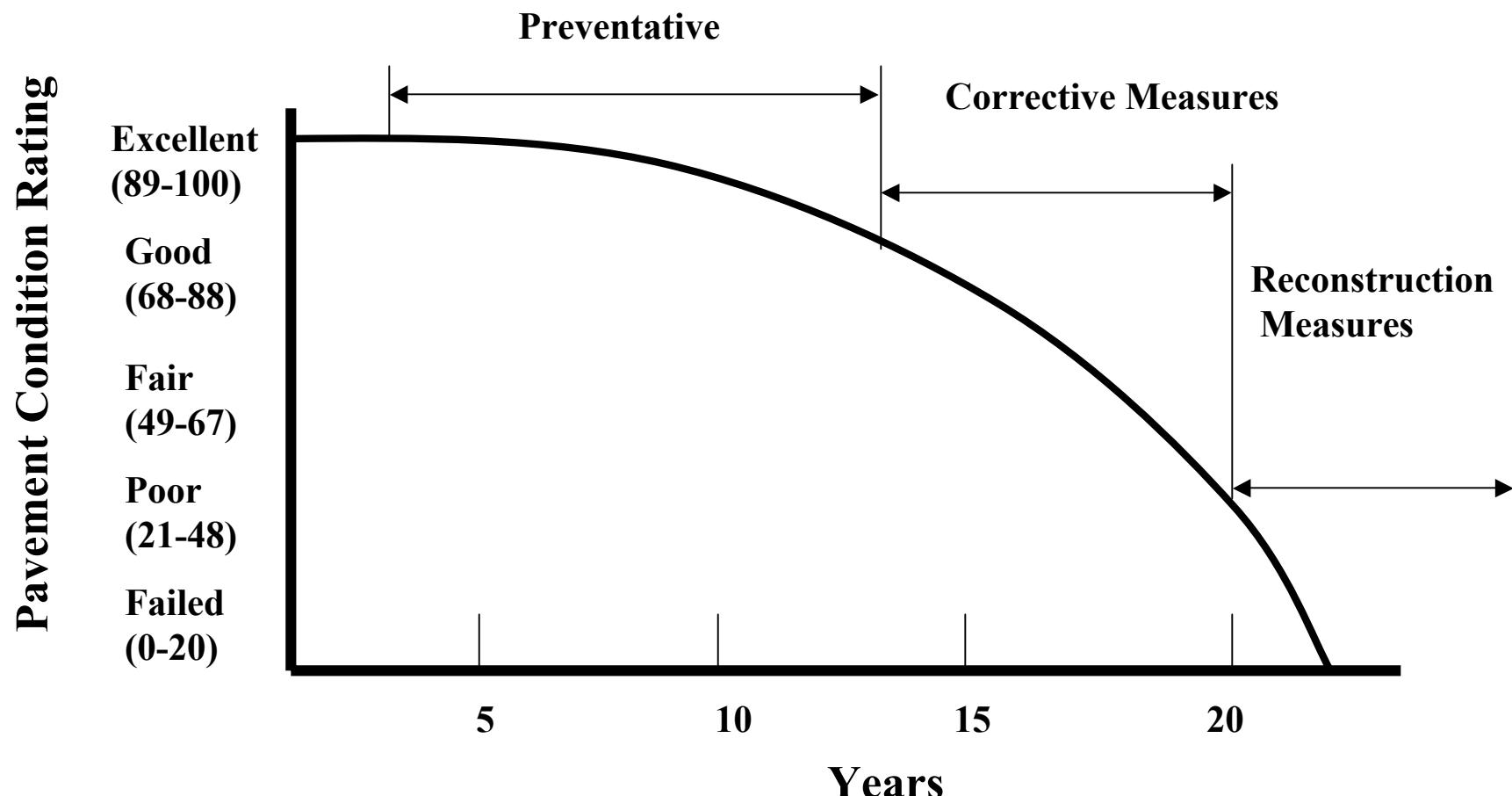
Foundation – Imported Base Material

Foundation – On-site Material (graded and compacted)

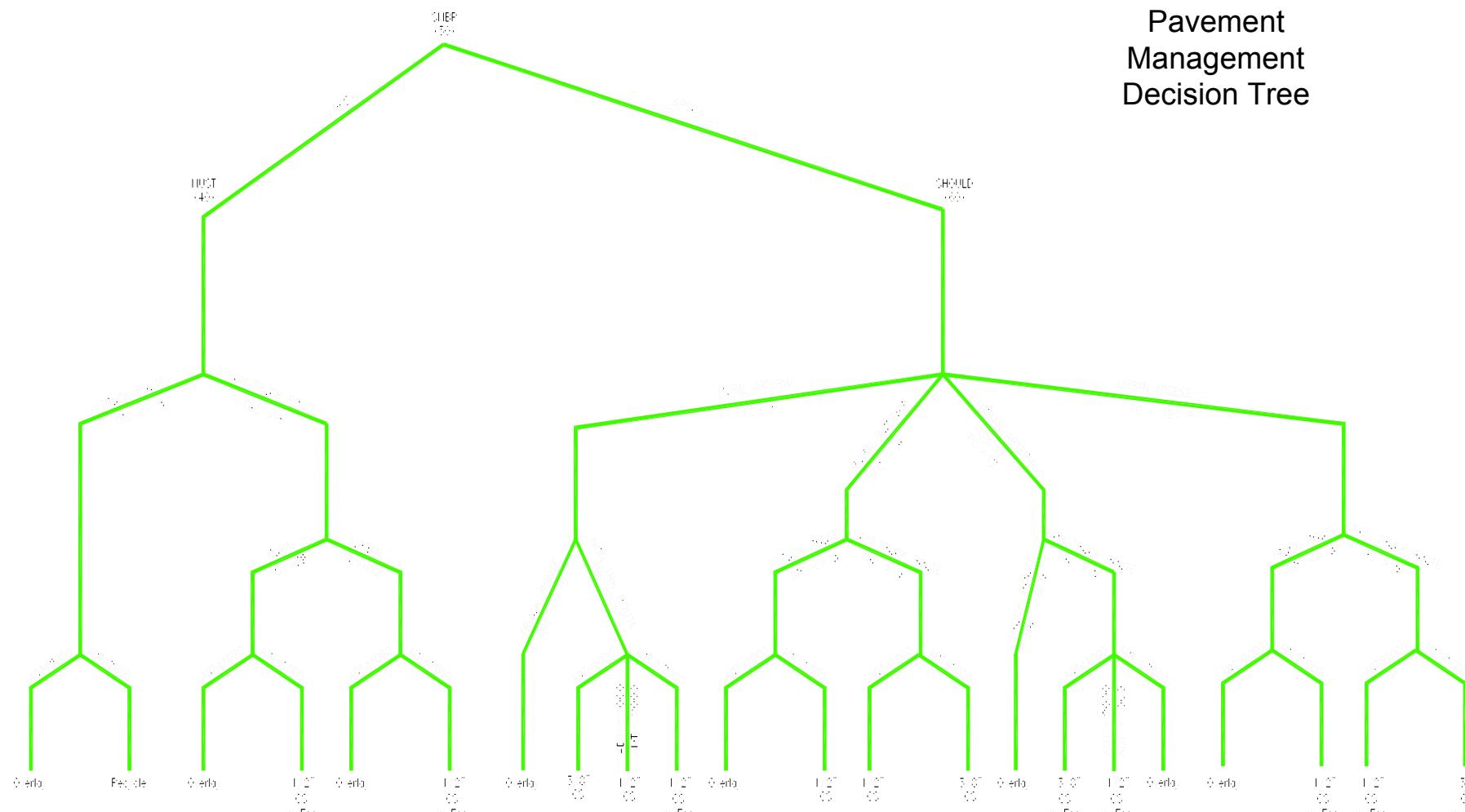
Underlying Ground (undisturbed)

When is a road all-weather?

Preventative vs. Rehab/Reconstruct (pavement structure life cycle)



Pavement Management Decision Tree



Balanced Transportation System?

- Operational differences between jurisdictions (scale, scope, and sophistication)
- Multi-model demands, services, and interconnection
- Environmental mitigation and restoration
- Transportation through: Coordination / Cooperation / Competition
- Compromise required due to the increasing disparity between financial capacity and level of service preferences

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Questions?

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